

REMARKS

Reconsideration is respectfully requested. Claims 2-4 are present in the application.

Claims 2-4 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Letechin (WO 02/14412 A1) in view of Wright (US 4,569,749) and Guffey et al (US 5,753,086). Applicant respectfully traverses.

Firstly, the Applicant thanks the Examiner for the analysis of the materials and informs of the following below to illustrate the applicant's position that the claims are allowable.

The Office Action states that the applied method does not meet the requirement of non-obviousness since the features distinguishing the applied invention from the closest analogue cited by the Examiner are known from the prior art.

However the Applicant cannot agree with the Examiner's conclusions and gives the following analysis of the cited analogue and references which according to the Examiner disclose the distinctive features of the applied invention.

The method for recycling organic polymer waste including rubber and thermal liquefaction of wastes at a temperature of 270 °C and higher at increased pressure in at least one solvent - alkyl benzene, separation of the liquid fraction and its distillation, characterized in that in the course of the thermal liquefaction of the waste the increased pressure of no less than

6.1 MPa is applied while after the distillation a part of the liquid fraction whose boiling point is not less than 210°C is introduced into the thermal liquefaction of a new batch to be processed as an additional component added to the solvent at a mass ration of at least 1:1 (WO02/14412 A1, Letechin) is cited as the closest analogue by the Examiner.

The Applicant would like to call the Examiner's attention that the Official Action contains several technical errors. For example the Office Action states that the closest analogue discloses thermal liquefaction at a pressure **up to** 6.1 MPa while according to WO02/14412 for the thermal fluidifying, a high pressure **not lower than** 6.1 MPa is used. The liquid fraction with a boiling point **not lower than** 210°C is introduced into the solvent as an additional component, but Examination tells that the closest analogue discloses the use of a part of the liquid fraction with the boiling point **below** 210°C.

Having analyzed the closest analogue and the applied invention the Applicant singles out the following features of the applied invention which distinguish the applied invention from the closest analogue:

1. the applied method is aimed for recycling RUBBER-
CONTAINING WASTES;
2. the thermal liquefaction of wastes is performed at a
pressure up to 6 MPa;

3. the thermal liquefaction is performed in the pseudo-fluidized bed, the organic solvent-waste weight ratio being more than 1.0;

4. a part of the liquid fraction, as subjected to catalytic reforming, with the boiling temperature below 220°C is used as a solvent.

5. performing catalytic reforming.

This invention is based on the task of creating a method for recycling rubber-containing wastes, which would enable to accelerate the process and simplify the technology, improve the process productivity as to the yield of a high-octane gasoline fraction and to produce technical carbon as a commercial product, and, thus, lower the power intensity, expand the functional capabilities and raise the quality of the products while lowering the operating costs.

The Examination notes that the Wright document US4569749 discloses a process of naphtha reforming to produce products containing gasoline fraction and the Guffey document US5753086 discloses a process for recycling plastic containing wastes including thermal liquefaction of the feed in a reactor containing an organic solvent including a fluidized bed reactor.

Without taking into account the relevant features of the applied invention and the aims of the applied invention and based upon the above-mentioned references the Examination makes the

conclusion that the present invention does not meet the condition of non-obviousness.

The applicant cannot agree with the Examination because the technical decision cannot be considered as obvious taking into account one set of features while leaving the others aside.

According to the "idea-suggestion-motivation" approach applied by the USPTO at determining obviousness the obviousness rejections should not be simple conclusions but should be well reasoned and supported. Also according to the said approach while determining obviousness the distinguishing features should be considered according to the aim of the applied invention. However having left aside a part of the features and failing to consider the whole set of features according to the aim of the applied invention the Examination has deviated from the said approach.

The Applicant agrees that the method chosen as an analogue allows recycling rubber containing wastes also with producing technical carbon products and high-octane hydrocarbon fraction that was mentioned in the document WO02/14412. However this method is inefficient in relation to rubber containing wastes, it was this fact that motivated the Applicant to develop the recycling method that will allow recycling this kind of waste with a higher efficiency.

The Applicant calls the Examiner's attention that since the applied invention is aimed for recycling rubber containing wastes requiring a special approach due to the properties of rubber the

development of the applied method required finding such modes and conditions of the performing the method that would allow solving this aim.

The Applicant agrees with the Examination that that the method of catalytic reforming is known from the prior art that is supported by the reference presented by the Examination. However the Applicant notes that in the reference a naphtha reforming is performed and the aim set in this document differs from the aim of the present invention. The same notes are made in respect of the pseudo-fluidized bed. Thus the document cited by the Examination does not mention thermal liquefaction of rubber-containing wastes with solving the aim similar to the aim of the applied invention.

The Applicant notes again that the aim of the applied invention that is yielding of a high-octane gasoline fraction and producing technical carbon as a commercial product with simultaneous accelerating and improving of the method of recycling can be reached only by using the whole set of the features of the applied invention and cannot be considered as obvious to the specialist in the field if only a single stage or mode is known.

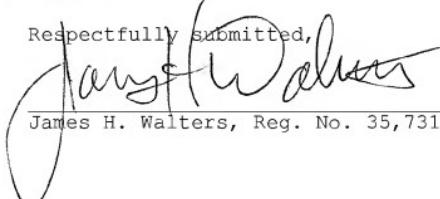
Regarding the dependent claims of the invention the Applicant considers that if the independent claim to which the dependent claims refer is considered as patentable the dependent claims will also meet the requirements of patentability.

Therefore the Applicant considers that he has answered the Examiner's objections and that the claims are not obvious under 35 U.S.C. §103(a) when considering the documents relied on, whether considered alone or when combined, and asks for reconsideration and allowance of the application.

The Examiner is asked to contact applicant's attorney at 503-224-0115 if there are any questions.

It is believed that no further fees are due with this filing in that the required fees are being submitted herewith. However, if additional fees are required to keep the application pending, please charge deposit account 503036. If fee refund is owed, please refund to deposit account 503036.

Respectfully submitted,


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- [Closing of the United States Patent and Trademark Office on Friday, December 26, 2008 \[signed 22 December 2008\] \(\[http://www.uspto.gov/web/offices/pac/dapp/ola/preonotice/uspto_20081226_closing.pdf\]\(#\)\) \(23Dec2008\) \[PDF\]](#)
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